

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P314472

Luminaire Tested: **24FCZ2-65HE-UNV-L83050-S-CA125-W2A-U-4000K**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

**Test Information**

Test Method: LM-79-08  
Report Number: P314472  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24FCZ2-65HE-UNV-L83050-S-CA125-W2A-U-4000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET  
Light Source: (336) 4000K TUNABLE CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

**Summary**

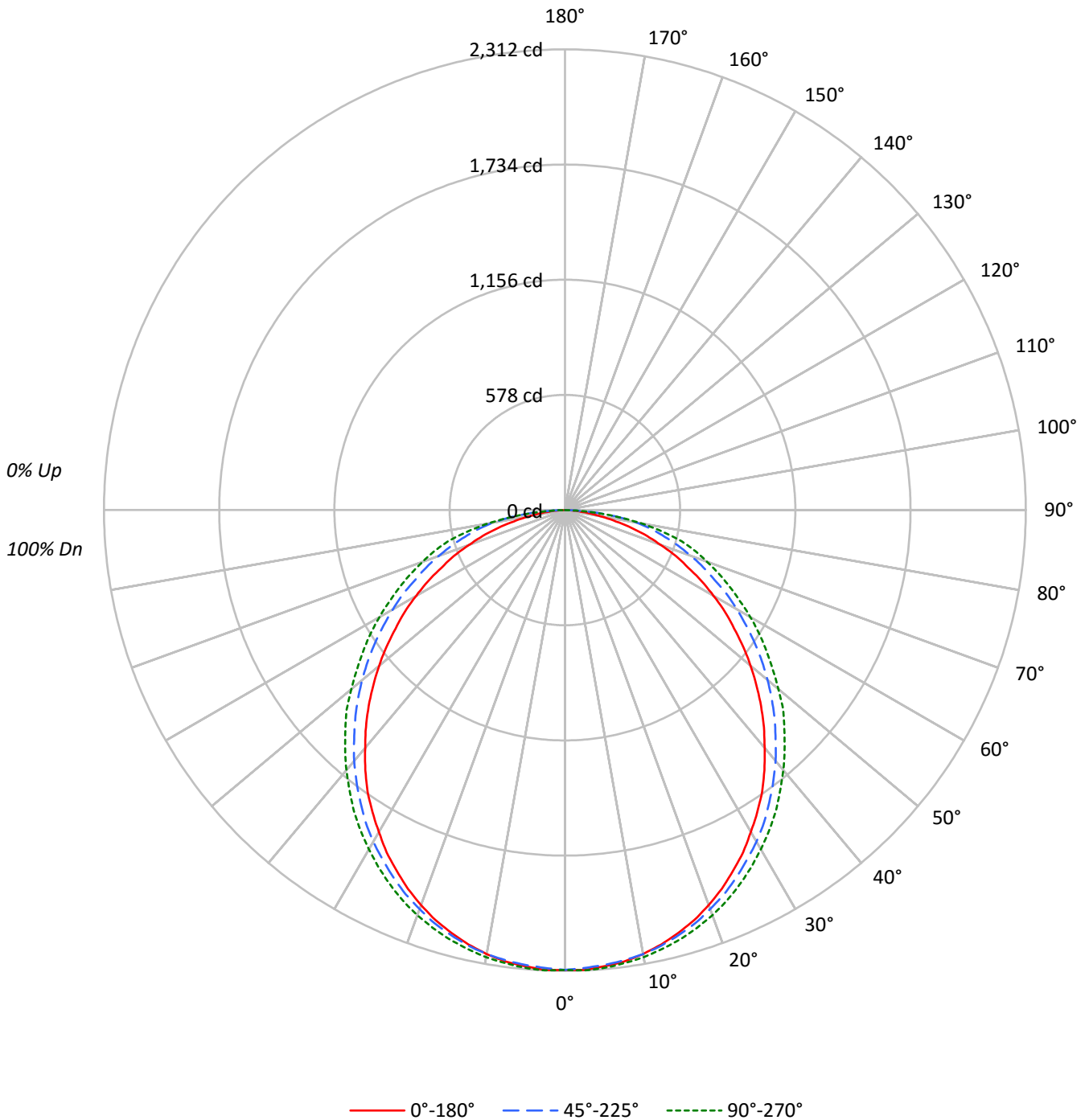
Lumens per Lamp: N/A  
Luminaire Lumens: 6569.0 lumens  
Efficiency: N/A  
Efficacy: 122.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 53.8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	3105	3105	3105
5°	3103	3094	3114
10°	3090	3090	3113
15°	3060	3075	3107
20°	3020	3050	3098
25°	2964	3020	3079
30°	2898	2986	3054
35°	2834	2937	3030
40°	2738	2888	2994
45°	2648	2831	2962
50°	2546	2778	2926
55°	2433	2726	2898
60°	2319	2684	2892
65°	2172	2637	2910
70°	2011	2651	2988
75°	1801	2701	3157
80°	1455	2861	3088
85°	1095	2513	2448



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	218.5	3.3
10°-20°	624.3	9.5
20°-30°	938.4	14.3
30°-40°	1117.8	17.0
40°-50°	1144.0	17.4
50°-60°	1029.9	15.7
60°-70°	808.8	12.3
70°-80°	525.0	8.0
80°-90°	162.4	2.5
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1781.1	27.1
0°-40°	2898.9	44.1
0°-60°	5072.9	77.2
0°-90°	6569.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6569.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2308	2308	2308	2308	2308	
5°	2297	2302	2291	2304	2306	218
15°	2197	2203	2208	2226	2230	620
25°	1997	2014	2034	2068	2074	920
35°	1726	1746	1788	1832	1844	1077
45°	1392	1425	1488	1544	1557	1073
55°	1037	1083	1162	1223	1235	930
65°	682	734	828	897	914	679
75°	346	413	520	590	607	367
85°	71	132	163	159	159	86
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2307.7	2307.7	2307.7	2307.7	2307.7
2.5°	2309.8	2309.8	2299.4	2309.8	2311.9
5°	2297.3	2301.5	2291.0	2303.6	2305.6
7.5°	2284.8	2284.8	2278.5	2291.0	2293.1
10°	2261.8	2263.9	2261.8	2276.4	2278.5
12.5°	2232.6	2236.8	2238.9	2253.5	2255.6
15°	2197.1	2203.4	2207.6	2226.4	2230.5
17.5°	2157.5	2163.8	2174.2	2195.1	2199.2
20°	2109.5	2117.9	2130.4	2157.5	2163.8
22.5°	2057.3	2065.7	2086.6	2111.6	2122.0
25°	1996.8	2013.5	2034.4	2067.8	2074.0
27.5°	1936.3	1950.9	1978.1	2013.5	2021.9
30°	1865.4	1888.3	1921.7	1957.2	1965.5
32.5°	1796.5	1819.5	1859.1	1896.7	1907.1
35°	1725.6	1746.4	1788.2	1832.0	1844.5
37.5°	1644.2	1671.3	1717.2	1761.1	1773.6
40°	1558.7	1592.0	1644.2	1690.1	1704.7
42.5°	1477.3	1512.8	1564.9	1615.0	1631.7
45°	1391.7	1425.1	1487.7	1544.1	1556.6
47.5°	1304.1	1341.7	1408.4	1464.8	1485.6
50°	1216.5	1256.1	1327.1	1385.5	1398.0
52.5°	1128.8	1170.6	1245.7	1308.3	1314.5
55°	1037.0	1082.9	1162.2	1222.7	1235.2
57.5°	953.6	993.2	1078.8	1141.3	1156.0
60°	861.7	905.6	997.4	1055.8	1074.6
62.5°	774.1	820.0	916.0	974.4	991.1
65°	682.3	734.5	828.4	897.2	913.9
67.5°	603.0	653.1	753.2	820.0	836.7
70°	511.2	567.5	674.0	742.8	759.5
72.5°	431.9	490.3	596.8	663.5	688.6
75°	346.4	413.1	519.6	590.5	607.2
77.5°	262.9	340.1	448.6	502.9	502.9
80°	187.8	269.2	369.3	394.4	398.5
82.5°	123.1	202.4	273.3	271.3	271.3
85°	70.9	131.5	162.8	158.6	158.6
87.5°	27.1	54.3	58.4	58.4	56.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)